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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,286	08/18/2000	Koichi Takeuchi	7217/62364	7542

7590 01/25/2005

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EXAMINER

WHIPKEY, JASON T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,286

Applicant(s)

TAKEUCHI ET AL.

Examiner

Jason T. Whipkey

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 7 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Change of Examiner

1. The examiner of record for this application has been changed to Jason Whipkey. Any inquiry regarding this application should be directed to the new examiner. Current contact information is provided in the last section of this communication.

Drawings

2. Corrected drawings were received on September 13, 2004. These drawings are approved and the corresponding objection is withdrawn.

Specification

3. The replacement title is approved and the corresponding objection is withdrawn.

Response to Arguments

4. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new grounds of rejection.

Claim Objections

5. The examiner notes Applicant's use of the phrase "an optional filter" on line 3 of claim 3. In order to be consistent with the specification and in light of claim 12, the examiner will presume that a typographical error was made. The claim will be treated as if it reads, "an optical filter".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 1-6, 8-15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (U.S. Patent No. 5,812,189) in view of Nakamura (U.S. Patent Application Publication No. 2001/0012053).

Regarding **claims 1 and 10**, Kimura discloses a lens (Figure 11) connected to a video camera, including:

a zoom lens (112; see column 9, lines 5-6);

a first lens group (113; see column 9, lines 6-7) located subsequent to said zoom lens;

a second lens group (114; see column 9, lines 11-12) located subsequent to said first lens group;

light quantity adjusting means (the unlabeled part between 113 and 114) arranged between said first lens group and said second lens group;

Kimura is silent with regard to including an electronic optical shutter.

Nakamura discloses:

an electronic optical shutter (liquid-crystal shutter 124 in Figure 8) arranged between a first lens group (see the optical systems in figures 5A-5E) and a second lens group (see the lens adjacent to and including lens 125 in Figure 5F, wherein the optical system of one of figures 5A-5E is connected to camera unit 130; see paragraphs 40-46) and including a first portion corresponding to a right image and a second portion corresponding to a left image (interceptive areas 124a and 124b in Figure 8B; see paragraph 119); and

an optical shutter driving portion for controlling said electronic optical shutter to open in a predetermined pattern (see *id.*; it is inherent that some sort of driver is necessary to operate the shutter as described).

As stated in paragraphs 7 and 31, an advantage to including a split optical shutter in a camera is that a three-dimensional image may be captured while still using a single aperture. For this reason, it would have been obvious at the time of invention to have Kimura's camera include the optical shutter described by Nakamura.

Regarding **claims 2 and 11**, Kimura is silent with regard to specifically using a diaphragm.

Nakamura shows in figures 5A-5G that light quantity adjusting means (diaphragm 123, which is placed adjacent to shutter 124 when optical system 121 is attached to camera unit 130) comprises a diaphragm for changing a size of an opening mechanically (see paragraph 111).

An advantage to using a diaphragm is that it can precisely control the amount of light permitted to reach an image sensor. For this reason, it would have been obvious at the time of invention to have Kimura's camera include a diaphragm.

Regarding **claims 3 and 12**, Kimura is silent with regard to including an optical filter.

Nakamura teaches that an optical filter may be united with liquid-crystal shutter 124 (see paragraph 135). An advantage to using an optical filter is that image quality can be improved. For this reason, it would have been obvious at the time of invention to have Kimura's camera include an optical filter.

Regarding **claims 4 and 13**, Kimura is silent with regard to placing a shutter next to the light quantity adjusting means.

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Nakamura teaches that an optical filter may be united with liquid-crystal shutter 124 (see paragraph 135). As stated in paragraph 135, an advantage to such a placement is that a more compact design is produced. For this reason, it would have been obvious at the time of invention to have Kimura's camera place the shutter next to the light adjusting means.

Regarding **claims 5 and 14**, Kimura is silent with regard to including first and second liquid shutters.

Nakamura shows in Figure 8B that the electronic optical shutter (124) is composed of first and second liquid shutters (124a and 124b; see paragraphs 128 and 129). Advantages to using liquid-crystal shutters include that they operate rapidly and the possibility of mechanical malfunction is eliminated. For these reasons, it would have been obvious at the time of invention to have Kimura's camera use liquid-crystal shutters, such as the ones described by Nakamura.

Regarding **claims 6 and 15**, Nakamura teaches that the predetermined pattern is switched to a pattern having an opening on the right and a pattern having an opening on the left alternately, corresponding to said first and second portions, respectively (see paragraph 119).

Regarding **claims 8 and 17**, Kimura is silent with regard to using an electronic optical shutter as a light quantity adjusting means.

Nakamura teaches that the electronic optical shutter (124) can be utilized simultaneously as said light quantity adjusting means (see paragraph 140). An advantage to using the shutter as the light quantity adjusting means is that a separate aperture may be eliminated, resulting in a more compact design. For this reason, it would have been obvious at the time of invention to have Kimura's camera utilize an electronic optical shutter as a light quantity adjusting means.

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Regarding **claims 9 and 18**, Kimura is silent with regard to including first and second liquid shutters.

Nakamura shows in Figure 8B that the electronic optical shutter (124) is composed of first and second liquid shutters (124a and 124b; see paragraphs 128 and 129). Advantages to using liquid-crystal shutters include that they operate rapidly and the possibility of mechanical malfunction is eliminated. For these reasons, it would have been obvious at the time of invention to have Kimura's camera use liquid-crystal shutters, such as the ones described by Nakamura.

Allowable Subject Matter

9. Claims 7 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding both of these claims, no prior art could be located that teaches or fairly suggests a lens or camera with a zoom lens, a first lens group located subsequent to the zoom lens, a second lens group located subsequent to the first lens group, light quantity adjusting means located between the first lens group and the second lens group, a two-part electronic optical shutter controlled to open in a predetermined pattern, wherein the pattern changes corresponding to a zoom condition of the zoom lens.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (703) 305-1819 or (571) 272-7321 beginning in late February 2005. The examiner can normally be reached Monday through Friday from 8:30 A.M. to 6:00 P.M. eastern standard time, alternating Fridays off.

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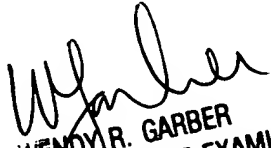
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (703) 305-4929. The fax phone number for the organization where this application is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTW

JTW

January 13, 2005


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